

TECHNICAL DATA FOR SPEEDCAM VISARIO

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SloMoExpress® IS THE FIRST COMPANY IN ASIA TO PROVIDE A RENTAL SERVICE FOR SPEEDCAM VISARIO, A UNIQUE DIGITAL SUPER HIGH SPEED CAMERA SYSTEM. THERE IS NO THIRD PARTY SOURCE OF REFERENCE FOR OUR CAMERA SYSTEM.

AFTER RENDERING, CAPTURED SEQUENCES CAN BE USED FOR BRAODCASTS, TV COMMERCIALS AS WELL AS MOTION PICTURE PRODUCTIONS. EVERY SPEEDCAM RENTAL INCLUDES THE SERVICE OF RENDERING THE CAPTURED IMAGES TO A FORMAT SUITABLE FOR THE RENTER'S USAGE.

PLEASE READ THIS DOCUMENT CAREFULLY BEFORE DECIDING ON RENTING OUR CAMERA SYSTEM. YOU WILL ALSO NEED TO SIGN THIS DOCUMENT BEFORE WE CAN COMMIT TO A RENTAL AGREEMENT.

1) FRAME RATES

SPEEDCAM is a digital high speed camera system capable of capturing slow motion image sequence from 10 to 10,000 frames per second. However it is recommended not to exceed 4,000 F.P.S. for all TV usage, and not to exceed 1,000 F.P.S. for motion picture usage.

SPEEDCAM is designed solely for filming super slow motioned footages. It is not a substitute for regular film or video cameras. Our technicians will not perform any capturing and rendering if renter decides to use the camera for film work under 150 frames per second unless it is prearranged in the rental agreement.

If the renter is not sure of which frame rates to use, we will always recommend shooting with SPEEDCAM at a higher speed. Due to the nature of progressive scanning, it is always better to speed up the sequence in post rather than slowing it down with unwanted jerkiness.

2) FRAME SIZE VS. SPEED

SPEEDCAM frame sizes vary at different film speed -

From 10	to	1,000 frames per second,	frame size is 1536 x 1024 Pixels
1,001	to	2,000 frames per second,	frame size is 1024 x 768 Pixels
2,001	to	4,000 frames per second,	frame size is 768 x 512 Pixels
4,001	to	10,000 frames per second,	frame size is 512 x 196 Pixels

Reference of other formats -

PAL D-1:	720 x 576 Pixels
NTSC D-1:	720 X 486 Pixels
HDTV:	1920 X 1080 Pixels
FILM 2K:	2048 X 1536 Pixels

3) FORMATS

All images captured by SPEEDCAM are in digital data readable only by SPEEDCAM software. After production and the standard 8 hour turn-around time, our technicians will render the above data into formats specified by the renter. Due to the large file size, (each frame captured by SPEEDCAM is a digital picture at approximately 2 million pixel.) we strongly recommend the director or cameraman to pre-select the usable part of the sequence during the preview of each take before it is saved onto the host computer.

OUTPUT FORMATS: **PAL Video** - Uncompressed 10 bit SDI video 720 x 576 @25 F.P.S.
NTSC Video - Uncompressed 10 bit SDI video 720 x 486 @29.97 F.P.S.
PAL / NTSC TGA Sequence
Digital Intermediate for motion picture usage -
1536 x 1024 TGA or TIFF sequence @24 frames per second

4) CAPACITY

For each camera take during production, all images are recorded in the SPEEDCAM camera unit's internal memory before it is saved to the host computer. The camera has a capture limit of 4 seconds of real time for each take which translates to 4,000 frames (2.7 minutes of PAL video) when filming at 1,000 F.P.S. When filming at 2,000 F.P.S. it can record a total of 8,000 frames (5.4 minutes of PAL video). When filming at 4,000 F.P.S., it yields a total of 16,000 frames which is more than 10 minutes of real time playback at 25 frames per second.

5) RENDERING

SPEEDCAM digital data requires rendering before they can be viewed in off-line or on-line environments. If renter is 100% sure of which takes they need for post production, our technicians can make a final rendering of all selected footages onto Digital Betacam*.

If time allows, we will always recommend to provide the renter with a rough rendering on Betacam SP**. After editing, when renter provides us with the time code of the exact footage they need, we can perform a final rendering of the selected takes with specified image resizing or blow-ups. Due to SPEEDCAM's large frame size, blowing up from the original files will yield the best quality.

* Since our post production hardware is located in Hong Kong. Overseas renter will need to schedule additional time for receiving the final Digital Betacam masters. However, there is an option for our technicians to render all final materials into TGA or TIFF sequence on the spot at D1 resolution which can be transferred back to tape at most post production facilities in the world. Cinetech will not be responsible for any charges incurred in the transferring.

** A professional DVCAM recording deck is always included in our rental package. In an overseas production, our technicians can make a rough rendering of all footages onto a DVCAM tape for off-line editing.

NOTES: IF TOTAL SAVED FOOTAGES EXCEED 20 MINUTES OF REAL TIME PLAYBACK (30,000 FRAMES IN PAL OR 36,000 FRAMES IN NTSC), IT WILL TAKE MORE THAN 24 HOURS IN RENDERING. THEREFORE, IT MIGHT TAKE MORE TIME FOR THE RENDERED FOOTAGES TO BE DELIVERED. THERE WILL BE AN ADDITIONAL CHARGE IF RENTER INSISTS ON A FINAL RENDER OF ALL FOOTAGES.

IF THIS IS ANTICIPATED, WE WOULD DEFINITELY RECOMMEND IN DOING A LOW RESOLUTION ROUGH RENDERING FOR EDITING AND PERFORMING A FINAL RENDER OF THE SELECTED TAKES AFTERWARD AT NO EXTRA CHARGE.

6) LIGHTING REQUIREMENT

Rated at ASA 200, SPEEDCAM requires the same type and amount of lightings needed for shooting with motion picture film stock. Same as shooting with a high speed motion picture camera, be prepared to use a large amount of lights for anything over 500 frames per second. The camera has an internal white balancing feature for correction of color temperature.

Generally speaking, we would recommend using tungsten light source when filming with SPEEDCAM. HMI lights with flicker free ballasts and a reliable power source will work just fine. However, we have experienced a flickering problem with all HMI lights under 6K.

7) LENS REQUIREMENT

Due to the large amount of lights needed, it is always recommended to use super speed lenses when filming with SPEEDCAM. Our rental package includes a full range of superior quality Canon FD lens (still photography lens). Focal length ranges from 14mm to 85mm. At 55 and 85mm, the lenses has an 1.2 f-stops.

Arri PL and B mount adaptors are also included in the package for filming with cine lenses. SPEEDCAM camera body is calibrated to accept standard Arri bridge plates and accessories.

8) DC OPERATION

We have also developed special adaptors and transformers for our SPEEDCAM camera and PC host to be used in conjunction with motor vehicle and UPS batteries. Any anticipated battery operation has to be specified during rental bookings.

9) HAZARDOUS FILMING ENVIRONMENT

Our technicians have the right to refuse operation of SPEEDCAM when renter engages the filming activities in a negligible and dangerous environment.

10) COMPUTERS ! *(You hate it but you need it ...)*

SPEEDCAM is a computer controlled equipment. As with all computers, a system crash can happen at anytime. In the case of any sudden data loss due to equipment or hard disk failure, SlomoExpress and the assigned technicians will commit to recover all lost data and will fulfill their duties in re-shooting such elements. However, we will not be held financially liable to all or part of the general production cost if such data are permanently lost.